Update on the California Phase 3 Reformulated Gasoline Program Implementation

December, 2003

California Environmental Protection Agency

Air Resources Board

Overview

- CaRFG3 Implementation update
- Ethanol Demand, Supply, and Price Issues
- Status of Oxygen Waiver Request
- Ethanol Permeation Study Progress Report

CaRFG3 Implementation Update

CaRFG3 Regulations

- Approved December 1999
- Amended July 2002
- Remove MTBE from California gasoline by December 31, 2003

Status of Refiners

- Refiners voluntarily complied with CaRFG3 regulations this year:
  - BP
  - ChevronTexaco (El Segundo)
  - ConocoPhillips
  - ExxonMobil
  - Shell
  - Kern Oil
- Supplied approximately 70% of California gasoline production

Status of Refiners (cont.)

- Remaining refineries to comply with CaRFG3

South Coast AQMD	1 refinery
Bay Area AQMD	3 refineries

- Transition begun, full compliance by December 31, 2003

Status of Terminals for Ethanol Distribution

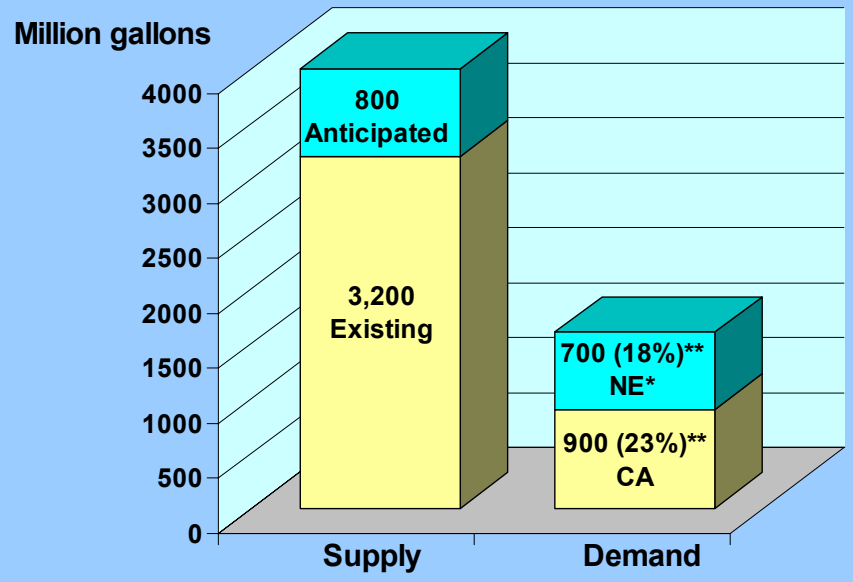
- **Common Terminals**
  - > **Kinder Morgan**
    - **Completed modifications**
    - **Shipping CARBOB as of December 1, 2003**
  - > **All other terminal operators**
    - **Completed modifications**
- **Proprietary Terminals**
  - **Completed modifications, except a ChevronTexaco terminal in Eureka (March 2004)**

Ethanol Demand, Supply, and Price Issues

Ethanol Demand

- California
  - In 2004, demand for ethanol estimated about 900 million gallons
- Northeastern States
  - New York and Connecticut banned MTBE use by Jan 1, 2004
  - Demand for ethanol estimated 400 to 700 million gallons annually, depending on economy of ethanol blend

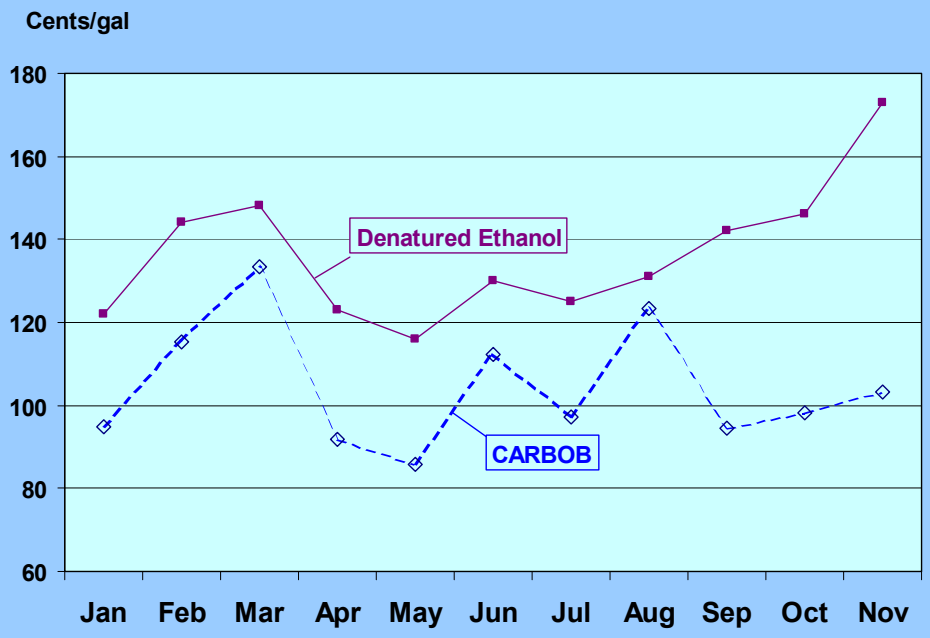
Estimated 2004 Ethanol Domestic Supply vs. CA and NE* States Demand



Source : *Ethanol Supply Outlook For California,* CEC, Oct. 2003

*New York and Connecticut
**As percent of total supply

2003 California Average Spot Price CARBOB vs. Ethanol



Source : California Energy Commission and Oil Price Information Service

Status of Oxygen Waiver Request

California Oxygen Waiver Request to U.S. EPA

- Submitted application in February, 2000
- U.S. EPA denied the request in June, 2001, on the basis of uncertainty on "commingling effect"
- July 2003, U.S. Court of Appeals for the Ninth Circuit vacated the U.S. EPA decision
- Staff is in the process of supplying new information on commingling and permeation emissions

Ethanol Permeation Study

Ethanol Permeation Emissions Study

- Evaluate the potential for increased evaporative hydrocarbon emissions due to the permeation of ethanol
  - > A joint research with CRC
  - > Test program included:
    - 10 representative vehicles
    - 3 fuels
  - > A preliminary report expected early next year